

Spectrum occupancy measurements: European perspective

- ECC held a workshop “How Measurement of Spectrum Occupancy can help Spectrum Management” in January 2014 presenting a cautious view from European regulators (summarized):
 - Focused studies are needed with careful selection of measurement parameters (e.g. bandwidth, scanning speed, antenna location) to be adjusted according to specific applications in the considered band.
 - High-quality measurement equipment and filters are essential. Simple sensors at fixed locations at rooftop level suffer from challenges.
 - Measurements cannot be used as basis for decisions on whether a particular frequency can be used at a certain location.
 - To give a detailed inventory of the spectrum usage in a big city, a vast amount of fixed receiving stations or other methods such as mobile data collection would be necessary.

ECC = Electronic Communications Committee

<http://www.cept.org/ecc/groups/ecc/client/introduction/ecc-statement-on-spectrum-occupancy-workshop>

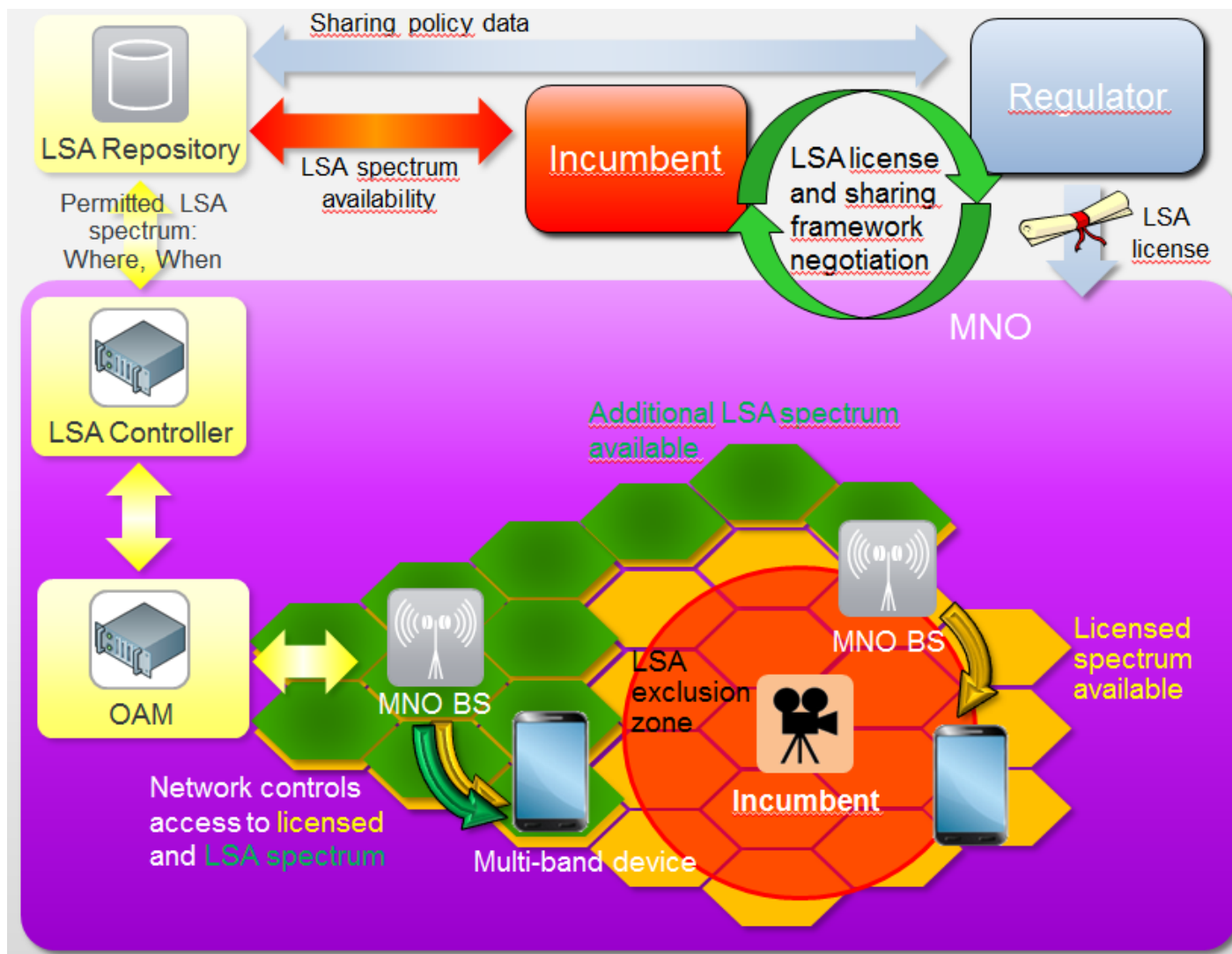
European Spectrum Sharing Approaches

- Collective Use of Spectrum (CUS)
 - “*Collective Use of Spectrum allows an unlimited number of independent users and/or devices to access spectrum in the same range of designated CUS frequencies at the same time and in a particular geographic area under a well-defined set of conditions*”.
- Licensed Shared Access (LSA)
 - “*A regulatory approach aiming to facilitate the introduction of radio communication systems operated by a limited number of licensees under an individual licensing regime in a frequency band already assigned or expected to be assigned to one or more incumbent users. Under the Licensed Shared Access (LSA) approach, the additional users are authorized to use the spectrum (or part of the spectrum) in accordance with sharing rules included in their rights of use of spectrum, thereby allowing all the authorized users, including incumbents, to provide a certain QoS.*”

“Report on Collective Use of Spectrum (CUS) and other spectrum sharing approaches”, RSPG11-392, EC, RSPG, Nov. 2011.

“RSPG Opinion on Licensed Shared Access”, RSPG13-538, EC, RSPG, Nov 2013.

Example of Licensed Shared Access (LSA)



Remarks

- European regulators are cautious about what spectrum occupancy measurements could provide for spectrum management.
 - There are other purposes for measurements as well (e.g. improve system internal performance, help in the development of new spectrum sharing approaches).
- How spectrum measurements could help LSA?
 - Defining rules and conditions for sharing (e.g. exclusion zones)
 - Interference measurements